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(54) Title: METHODS FOR REDUCING PARTICULATE MATTER EMISSIONS FROM DIESEL ENGINE EXHAUST USING ETHANOL/DIESEL FUEL BLENDS IN COMBINATION WITH DIESEL OXIDATION CATALYSTS

(57) Abstract: Considerable progress has been made in recent years in reducing toxic exhaust emissions from diesel engines. Diesel oxidation catalysts, for example, are finding increasing use in reducing carbon monoxide, hydrocarbons and the soluble organic fraction of particulate matter in such emissions. Recent innovations in surfactant stabilizing additives now enable ethanol to be blended with diesel fuel in clear, stable solutions. On combustion, ethanol/diesel fuels generate less toxic emissions than the base diesel, but surprisingly when used in conjunction with diesel oxidation catalysts, particulate matter especially is dramatically reduced. The effectiveness of a diesel oxidation catalyst attached to a diesel engine exhaust is unexpectedly enhanced by the presence of ethanol in the diesel fuel.